

The Locomobile 5-Ton Truck

In Use By

Libby, McNeill & Libby

Between their Pineapple Cannery in Kahaluu and the City is giving absolute satisfaction.
It is unquestionably the best truck in the Islands today

Specifications of Locomobile Truck Chassis Five-Ton Model

AXLES—Drop forged open hearth steel, heat treated. Front axle: 1 section 4 ins. x 2 1/2 ins. with center web 3/4 ins. thick. Rear axle: Rectangular section 3 1/2 ins. x 2 1/2 ins.

BRAKES—Emergency brake: Internal expansion type, expanding against inside of rear wheel sprocket drums. Diameter 18 inches; width 4 1/2 inches. Total effective emergency braking surface 355 square inches. Foot brake: Contracting type, operating on drums on outer ends of jack shafts. Diameter 13 1/2 inches; width 3 inches. Total effective foot braking surface 225 square inches.

CAPACITY—Ten thousand pounds.

CARBURETOR—Locomobile design with hot air regulator and hot water jacket. Piston valve operated by hand throttle lever on steering column and by foot accelerator pedal. Butterfly valve controlled by governor. Connections between butterfly valve and governor enclosed and sealed.

CHAIN CASES—Chains are protected by sheet metal chain cases designed to permit adjustment of distance between sprocket centers.

CLUTCH—Multiple Dry Disc Clutch with seven driving discs and seven driven discs. Driven discs are faced on both sides with non-burn material. Gradual engagement not affected by temperature. Clutch being self contained is always in alignment. Can be removed as a unit without disturbing any other part. Clutch driving shaft is chrome nickel steel and has a universal joint at each end.

COOLING SYSTEM—Cooling system consists of honeycomb radiator, through which water is circulated by means of a centrifugal pump. A 24-inch fan, running on ball bearings and driven by a pulley on crank shaft, induces a current of air to keep water cool. Radiator is located behind channel cross member so as to be perfectly protected.

DIFFERENTIAL AND JACK SHAFT—Differential is of the bevel gear type with four pinions. Inside ends of pinions are supported in a yoke. Bevel driving gear and jack shaft are chrome nickel steel. Differential case is carried on roller bearings. Jack shafts are enclosed by sleeves (steel castings) bolted to transmission case, these sleeves having at the outer ends spherical seats which fit brackets bolted to frame side members. Jack shafts at outer ends are carried on annular ball bearings.

DIFFERENTIAL LOCK—On right hand jack shaft there is an interlocking dog which can be engaged by a lever with dog on differential housing, thus interlocking both jack shafts. With this attachment, when one wheel is on slippery ground the differential can be locked and the truck driven from the wheel that has traction.

DIMENSIONS—Wheel base: 140 inches. Track: 65 inches front; 70 inches rear. Overall length: 265 1/2 inches. Overall width at rear hub caps: 87 1/2 inches. Width of frame: 40 inches. Platform space: 14 ft x 6 ft. (for wider). Inside width of driver's seat: 45 inches.

DISTANCE RODS—All driving stresses are transmitted to the frame through channel section cast steel distance rods. Rods swivel front and rear, affording a universal connection between axle and frame.

You can save tire expense by using

Interchangeable, Demountable Tires

BECAUSE ONLY ONE SIZE NEED BE CARRIED IN STOCK.

This means your investment in spare tires will be less. Your chances of loss through rubber deterioration will also be decreased.

BECAUSE THE ACTUAL WEAR IS LESSENED.

As an illustration, suppose one of the dual rear tires should need replacement. If front and rear tires are not interchangeable a new and unworn tire must replace this one. The unworn tire will carry all the load on that wheel. This is a heavy overload. It means rapid deterioration. If tires are interchangeable, a front tire may be substituted for the rear tire that needs replacement. As all tires are worn to nearly the same size, each will take nearly the same load and give the most service.

OTHER IMPORTANT FEATURES OF THE LOCOMOBILE 5-TON TRUCK ARE:

Every part designed for heavy truck duty.
Highest standards of workmanship.
Best materials used.
Motor—45 H. P. at 99 R. P. M.
Five bearing crank shaft.
Four speed transmission.
Large Transmission gears.

40x6 inch tires, single front, dual rear.
Driving chains each stand 44,000 lbs. pull.
Differential lock.
Steel wheels.
Dry Disc Clutch.
Sprags.
All parts easily accessible.

These features combined only in the Locomobile Five-Ton Truck.

Ignition and oiling system not subject to drivers control.

Royal Hawaiian Garage,

Limited.
AGENTS FOR THE LOCOMOBILE TRUCK

Specifications of Locomobile Truck Chassis Five-Ton Model

EQUIPMENT—Two side lamps, one tail lamp, one horn, one hub odometer; tool kit complete, including tool bag, tools and spare parts.

FINAL DRIVE—Double chains to rear wheels. Chains are specially large, having 2-inch pitch and a breaking strength of 44,000 pounds for each chain.

FRAME—Made throughout of pressed chrome nickel steel. Side members 6 inches x 2 1/2 inches x 5/16 inch. All joints hot riveted. All holes drilled and reamed.

GEAR—The total gear and sprocket reductions from engine to rear wheels are as follows: First speed 10.75; second speed 19.8; third speed 13.4; fourth speed 10.42; reverse 33.4.

IGNITION—High tension dual system (magneto and battery) with fixed spark.

LUBRICATION—Motor lubrication is of the internally contained circulating type. A gear pump forces oil in a constant stream to the crank shaft bearings and to troughs into which the connecting rods dip. The cylinders are lubricated by spray due to the splash. All gears run in oil. All bearing surfaces subjected to any practical wear are provided with grease or oil cups.

MOTOR—Four cylinder, four cycle, water cooled. Bore 5 inches, stroke 6 inches, developing 45 H. P. at 900 r. p. m. Speed controlled by centrifugal ring governor. Cylinders cast in pairs. Inlet and exhaust valves interchangeable, located on opposite sides of motor and operated by separate cam shafts. Clearance diameter of valves 2 1/2 inches. Crank and cam shafts are chrome nickel steel, heat treated. Cam shaft cams are forged integral with shafts. Crank shaft has diameter of 2 1/2 inches, and five bearings, giving 41.3 sq. inches of bearing surface (projected area). Bearings are bronze, babbit lined. Bearings accessible from beneath by removing oil pan. Crank case is government bronze.

STEERING GEAR—The steering gear is of the screw and nut type. The screw is case hardened steel with phosphor bronze nut of ample size.

SPRAGS—Heavy sprags on rear axle, operated from driver's seat, for use on hills.

SPRINGS—Semi-elliptic, chrome nickel tungsten steel. Front: 42 inches long, 3 inches wide. Rear: 50 inches wide. Supplementary spring over rear axle. Spring link pins ground. Spring eyes bushed with phosphor bronze bushings.

TIRES—Front, single, 40 inches by 6 inches; rear, dual, 40 inches x 6 inches. Demountable and interchangeable front and rear.

TRANSMISSION—Selective type, four speeds forward and reverse. Gears are chrome nickel steel, heat treated, and mounted on roller bearings. Case is manganese bronze. Gears and shafts can be inspected or removed from beneath without disturbing body or load.

WHEELS—36 1/2 inch. Roller bearings. Either cast steel or wooden wheels furnished; cast steel wheels recommended.



M-T-R CAR GOSSIP

AUTOMOBILE TRUCK BRINGS PINEAPPLES IN TO MARKET

The Locomobile five-ton truck recently purchased from the Royal Hawaiian Garage by Libby, McNeill & Libby for use in their big pineapple plant on windward Oahu, is hauling millions of cans of pineapple from Kahaluu, where the cannery is located, to the city.

This truck is running day and night between the cannery and the city, via the Pail, and is being operated by a double shift of drivers. The truck arrived at a most opportune time, as the canning season is at its zenith now.

During the short time that this truck was on exhibition at the garage it had hundreds of visitors daily and received much favorable comment. The enormous strength of the differential and bronze crank and transmission case was a revelation to all who saw it. The big powerful engine is capable of hauling 12 tons up the steep grade of the Pail.

The Locomobile bears the distinction of being the only truck in America that has a bronze crank case. The radiator in the powerful car holds 10 1/2 gallons of water, and the engine can be run day and night without overheating, so perfect is the cooling system.

Being equipped with steel wheels the truck is absolutely safe, as far as the rims cracking when overloaded and is not affected by heat. A big feature is the five-main bearing crank shaft, with which every car is equipped.

The truck is so controlled by an automatic governor that it cannot be driven over 11 miles an hour, thereby rendering it absolutely safe, no matter how reckless the driver may be.

Another feature of this powerful truck is the differential lock with which it is equipped, so that if the car should get stuck in the mud the differential lock can be brought into play, making both wheels turn with the engine, thereby enabling the car to pull itself out with its own power.

The whole construction of the Locomobile truck is based on the fact that

it is expected to give service, and with this view in mind the builders who are recognized as the brainiest men in the automobile world today, set to work on the five-ton truck and the result is a perfectly constructed machine.

UNIQUE TESTS OF STEEL USED IN FORD CARS

The value of vanadium steel in the construction of Ford cars was never more forcibly brought to notice than in the newspaper reports which state that the government would have to pay \$830,295 for forty locomotives of vanadium steel, or \$493,010 for the same number built of carbon steel.

The government is going to buy forty electric locomotives for use on the Panama canal in towing the ships through. It shows the value of vanadium steel in a way that, perhaps, has never been brought to automobilists' attention before.

It was the Ford Motor Company that really made vanadium steel popular among the users of the finest metal in America.

Vanadium steel, when scientifically heat-treated, as it is by the Ford process, is practically proof against crystallization, the one great deteriorating force which automobile-makers have to contend with in the selection of their steels. When heat-treated, the molecules of vanadium steel actually become so interlaced that they cannot crystallize. Their tensile and elastic strength has been found to be greater than that of any other steel.

In the booth of the United Steel Company at the automobile show in New York recently was shown a front

axle of a Ford car which has been "punished" in the torsion machine at the University of Michigan. For over two days the steel experts of Ann Arbor were trying to tie the axle in a knot. Two complete turns of the torsion machine were made, and the Ford axle refused to break. The attempt to tie the axle into a knot was abandoned because it was difficult to handle the steel in the torsion machine.

The Schuman Carriage Co. have sold fifty of these fords in the last five months and still the demand for them seems to be on the increase.

SENATE TO BUCK \$60,000 BANANA MEASURE

There is going to be a fight on Senator Chillingworth's banana bill, which has been returned to the senate after having been amended in the house so as to make the appropriation \$60,000 in place of \$30,000. This fight, by all the present signs, will be led by Senator Brown, who made a number of frank statements yesterday regarding the action of the house, before the bill was assigned back to the ways and means committee.

It seems almost certain that that committee will recommend that the senate do not concur in the amendment. From a statement made by Senator Rice, chairman of the committee, it is clear he is not in sympathy with the amendment. He stated that though in appropriating \$60,000 under the measure, it does not mean that that much will be used; it still is counted as used in figuring an appropriation for other purposes.

A Novel New Year's Present
The cash register in a Dallas, Tex., restaurant was silent on New Year's morning between the hours of 12 and 2. The proprietor stood behind the register, received the checks and greeted each customer with a smile and "No money, thank you." It is the manager's annual custom to show, in this way, his appreciation of liberal patronage during the year.

FEDERAL ONE-TON TRUCK POPULAR IN HONOLULU

The Standard Motor Car Company has put in a busy week filling orders for Federal one-ton trucks, says the San Francisco Examiner of recent date.

On Monday the company shipped five to Honolulu to the Schuman Carriage Company, who, notwithstanding the limited territory the island affords, has had no difficulty in creating a growing demand for the motor-driven vehicle.

On Tuesday a carload was shipped to Bakersfield, Wednesday four Federal trucks departed for Reno, Thursday another was delivered to the Golden Gate Meat Market, San Francisco, and Friday S. G. Rump of Vallejo annexed a one-tonner, making in all a distribution of twelve Federal trucks for the week.

Speaking of the future Manager Nichols says:

"It looks as though we would have to increase our allotment, so great is the current demand and so bright are the prospects for ensuing months. Never before has the commercial field presented such promising possibilities, and with the Federal, which to our thinking is supreme in its class, we expect to surpass any previous record. We have made a study of the service, and by keeping this department open day and night are in a position to take care of our customers any hour in the twenty-four."

THIS THE LAST DAY OF ART EXHIBITION

W. A. Coulter, the marine artist, will close his exhibition in the Castle & Cooke hall today. There were so many things, both in business and pleasure lines, going on when he opened the exhibition that the results were very discouraging. He had about decided to hold an auction sale of the pictures, when several purchases were made and he canceled the engagement of the auctioneer. This was a week ago and since then Mr. Coulter has sold more of his work. He will leave in the Wilhelmnia on Wednesday. His paintings have been greatly admired by those who have visited the exhibition here.

JAPAN'S SKYSCRAPERS

With the completion of a seven-story building, Tokio is able to boast of the first skyscraper in its history. The structure, begun in January, 1910, was but recently completed. It is considered fire and earthquake proof.

MONSTER MOTORS OUST HORSES IN DRAYING

Last week the Royal Hawaiian Garage delivered to Allen & Robinson a huge Knox-Martin Tractor for use in their lumber yards; this week they report the sale of a duplicate of the monster machine to Huestace-Peck Co. for use in hauling their dump wagons around town. The same firm also bought a Reo, 2-ton truck, for use in lighter work.

The San Francisco Chronicle in a lengthy article recently, commented on the phenomenal performance of a model 32 Knox-Martin Tractor carrying a 19-ton load of granite up a 12 per cent grade in Oakland. Judging from the number of inquiries about the tractor a number of other firms will shortly be using these powerful machines which does the work of six and eight horses.

D. A. McNamara of the Honolulu Dairyman's Association this week took possession of a 1913 Reo touring car and is very proud of his new possession. Hardly a week goes by in which there is not a purchaser for one or more of these medium priced cars.

Manager Wells who has had one of the Reos in the rent service for the past year, reports that the car is still as good as new despite the fact that it has done the majority of hard trips around the island at times when the roads were anything but good. He considers the Reo the best value in the automobile market today.

Belgian Army Menace

The Belgian government has decided to introduce a bill in the coming parliament demanding the increase of the Belgian army from 42,800 men in time of peace to 55,000. This will make the army when on a war footing number about 500,000 men. The bill will call for an increase in the army expense amounting to about \$20,000,000. The system now in force in Belgium of "one son per family" will give place to "two sons per family," which will give an annual contingent of 35,000 recruits.—Army and Navy Journal.

DIED

COYNE—At her late residence, 1534 Magazine street, Honolulu, March 22, 1913, Anna, wife of Arthur Coyne, aged forty-eight years. Funeral from the family residence this afternoon at three o'clock.

HUDSON CAR CREATES SENSATION IN SWEDISH ICE RACING EVENT

STOCKHOLM, Sweden.—America scored its first motor car victory in Sweden during the annual winter ice racing classic.

The first prize for the kilometer race was captured by a beautiful 1913 Hudson car. The distance of one kilometer from a standing start was covered by the fleet automobile in 40 seconds. The rate of speed was a mile in approximately 45 seconds.

The victor far outdistanced the field, so remarkable was its getaway under the adverse conditions occasioned by the glassy surface of Lake Malar on which the race was held.

An American car won second position at the finish, the Cadillac finishing the kilometer in 45.4 seconds.

Ice racing by motor cars has become one of the most fascinating sports to the Swedish people and thousands assembled along the Lake Malar course to watch the annual events.

European cars were favorites owing to the fact that they were better known to the racing fans. The crowd cheered its favorites as they came to the starting line. A Swede in the em-

ploy of the Hudson dealers for Sweden was at the wheel of the car about which many inquired because of the beauty of its lines. Its quietness alongside of the noisy European cars in the event was also remarked by the spectators.

The starter set the various cars on the straight line drawn across the course and they were away at the crack of his pistol.

Most of the cars were still in first speed when out of the mass of smoke and whirling snow shot the new car from America, the Hudson, several yards ahead of the artillery-like clatter of the exhausts of other contestants.

In an instant it had gained 20 feet on the field, and was closely followed by the second American car, the Cadillac. Gradually the Hudson commenced pulling away and the driver eased up at the line of finish five and one-half seconds in the lead of the contender. Since the race the remarkable new car from America has been on the tongue of everyone in Stockholm who is interested in motor cars.

DEMOUNTABLES FEATURE OF PIERCE

One of the new features of the Pierce-Arrow Cars this year is the demountable rim.

While apparently a new departure, like all Pierce-Arrow products it has been thoroughly tried out by the factory before the public had a chance to use it. The initial test before adoption consisted of service of over forty thousand miles on one car and since July of 1912 it has proved its worth on all Pierce-Arrow under all kinds of conditions, roads, drivers and climates.

In the first place it has a cover for the tire valve, thus protecting the tire from dust and moisture. Other makes leave the valve unprotected. Second: It is perfectly safe with six bolts—with other makes safety demands more than six bolts, thus increasing the time necessary to make the change.

Third: It is interchangeable. A 36x4 1-2 inch spare rim can be used on a 38x5 1-2 wheel or visa versa; but

tires are not interchangeable on rims of different sizes. Fourth: The four contact surfaces are flat and cover a large area obviating sticking and preventing wear. Other types have angular ridges of limited area which create difficulty in removing. These ridges are essential to safety in other types but the wedges soon wear the ridges away.

Fifth: The felloe band and rim flange are stamped from solid sheet steel making these two closely related parts an exact fit and assuring the four large bearing points so perfect a contact that no truing is needed and the bolts and nuts become only a precautionary adjunct and clamp. Other makes are rolled felloe bands and rim flange, fit loosely and depend entirely upon special setting of bolts and wedges to true the rims and keep them in place.

In other words the Pierce-Arrow demountable rim protects the tire—its lighter than some, slightly heavier than one other make but in all whose weight is in exact proportion to the demands upon it—is interchangeable with other sizes—whose contact surface prevents seizing and consequential delay, has a guard against wear making it durable and safe with only six bolts—is so constructed that change of rims can be made easily by the most inexperienced driver in seven minutes and altogether is a rim that use has proved to be not only demountable in name but an incontestable fact.